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DISCOVERERS OF AMERICA  
ANNUAL ADDRESS BY THE PRESIDENT  
HOWARD DOUGLASS OF BOSTON

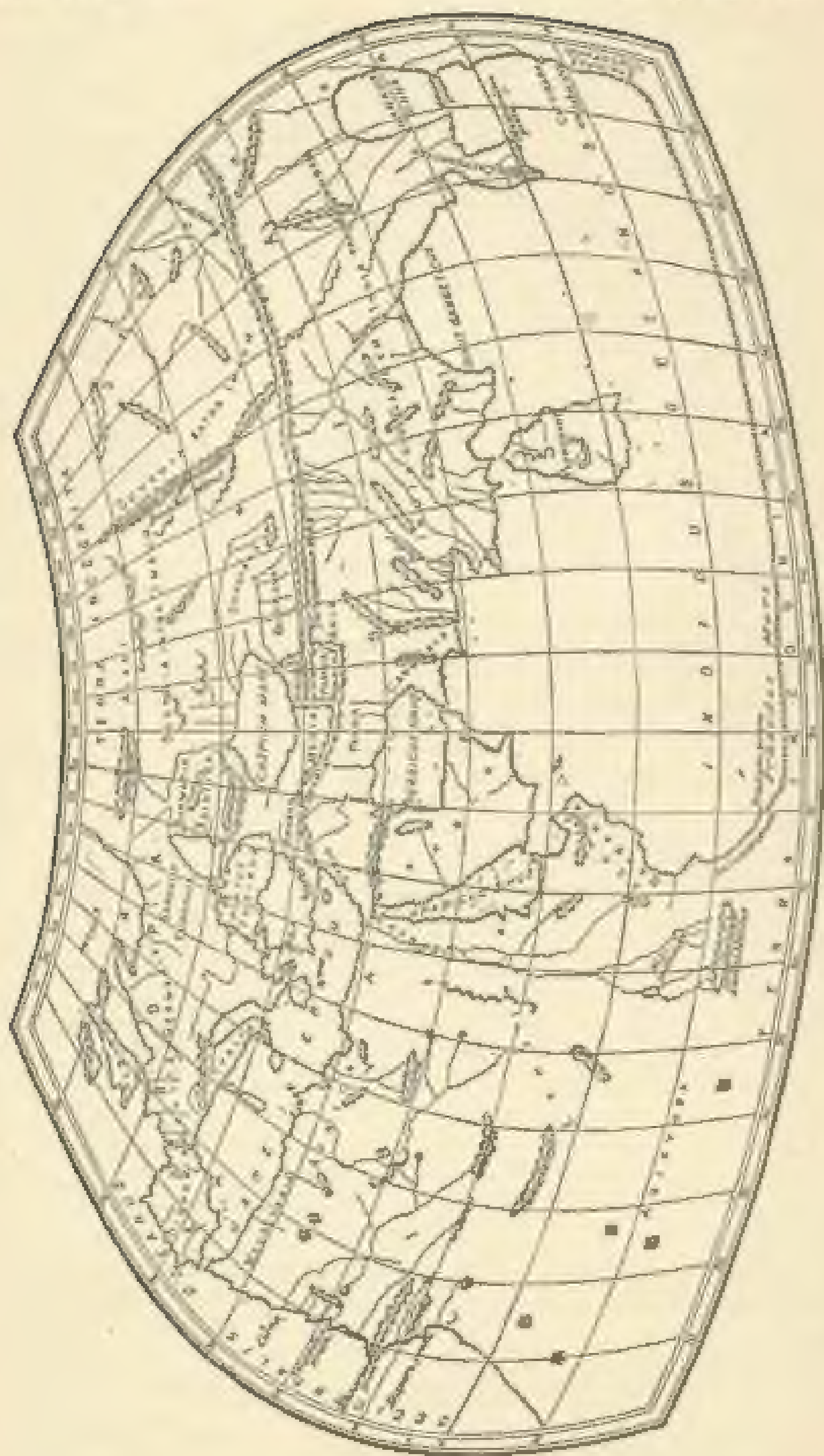


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CLAUDIUS PTOLEMY MAP, CIRCA 150.





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DISCOVERERS OF AMERICA

ANNUAL ADDRESS BY THE PRESIDENT

HON. GARDNER G. HUBBARD

*(Presented before the Society January 1st, 1883)*

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It is appropriate that we should take as the theme of our annual address for the year 1882 the discoverers of America.

The discovery of America was the work, not of one explorer but of many, carried on during a long series of years, beginning with the Northmen, continued by Columbus, Vesputius, Magellan and Drake, and ending only with the nineteenth century.

Before we speak of the discoverers let us hastily review the condition of the old world prior to the discovery of the new.

Two thousand years ago philosophers generally believed the world to be round, and the most noted of ancient geographers, Eratosthenes, computed its circumference at 25,200 geographic miles. The true figure is 21,000 geographic miles or 24,500 English miles.

Ptolemy, two hundred years later, estimated it at 18,000 geographic miles, and made a series of twenty-six maps, showing the the equator and the zones north of the equator, with parallels of latitude and meridians of longitude. As his base-line was too short and his knowledge of places was generally derived only



Ptolemy, a geographer who had no accurate means of determining distances, his maps, though showing most of the countries of Europe, Asia and northern Africa (plate 1\*), were inaccurate and unreliable, though vastly superior to those of a later date. These maps were either entirely lost sight of or so changed by the pictorial extravagances of the map-makers of succeeding ages as to be of little value (plates 2† and 4).

St Augustine, Thomas Aquinas and other fathers of the church believed the earth to be a vast plain. They said with Isaiah, that the heaven which embraces the universe is a vault; with Job, that it is joined to the earth; and with Moses, that the length of the earth is greater than the breadth. This they insisted was the teaching of the word of God and must be accepted. Those who believed that the world might be round declared that there could be no inhabitants on the other side, for that Christ said "All tribes of the earth shall see the Son of Man coming in the clouds of heaven with power and great glory."

The famous bull of Alexander VI, published in 1493, which gave all newly discovered land one hundred leagues west of the Azores to the Spaniards and all east of that line‡ to Portugal, implied that the earth was a plain.

For 1,500 years science and the church were in opposition as to the shape of the earth, and there were very few, whatever might be their convictions, who dared question the infallibility of the church. Thus all progress in natural science was checked, and geography and map-making practically ceased to exist.

Early in the fourteenth century Marco Polo's book of travels appeared. This greatly increased geographic knowledge and had a direct and strong bearing on the discovery of America.

In the preceding century the father and uncle of Marco Polo, merchants of Venice, made two journeys to the court of the great Khan Kublai, in eastern China. On the second journey Marco Polo accompanied his father and uncle. They went by Persia, over the Pamir mountains, through Turkestan, across the great desert of Gobi, and through Mongolia to China. There they resided for many years, sent by the Khan on several missions and

\* Claudius Ptolemy's map of the world (about A. D. 150), forming the accompanying plate 1, is reproduced from "The Discovery of America," by John Fiske, 1892, vol. 3, p. 202.

† Photolithographed directly from the "Chronicon Norwichegensis" (Anthon Huettinger Schiedel, 1493, fol. xlv).

‡ Shown in the Juan de la Cosa map, plate 4.



occupying important positions. On their return they sailed through the China sea and Indian ocean to India, stopping at the Philippine and Spice islands, Sumatra and Ceylon; from India they traveled by land through Persia and Asia Minor, and by the Black and Mediterranean seas to Venice. Soon after his return Marco Polo was taken prisoner by the Genoese and during his captivity wrote an accurate description of the countries through which he traveled and in which he had lived so many years, and of the island of Cipango or Japan, with its inexhaustible riches of gold and pearls, 600 miles east of China. He also described the voyages of the Chinese to the islands of the Pacific, to Ceylon, and to India, and of the rich trade carried on by the Mohammedans between the Spice islands, India and the Mediterranean. These travels became gradually known to geographers, and in the fifteenth century gave a new impulse to geographic study.

About the same time the old maps of Ptolemy, which had been hopelessly obscured by the graphic fancies of the cosmographers of the dark ages, were, with his writings, brought from the East to Italy. The maps of the dark ages showed the Mediterranean and the countries around it, Arabia, Persia, Media, Gog and Magog, and a little of northern Africa; but so vaguely and inaccurately that today one would scarcely recognize these countries on existing maps.

Toscanelli, an Italian, prepared a map about 1474, taking the travels of Marco Polo as his guide. On other maps Cathay, or China, had been delineated as east of Europe; Toscanelli's transferred it to the west. His map shows the Atlantic ocean, Cipango 100° west of Europe, and still further westward, Cathay. He sent a copy of this map to the king of Portugal, and subsequently another to Columbus, urging him to make his contemplated voyage to "The land where the spices are born, where the temples and royal palaces are covered with planks of gold" (plate 3<sup>d</sup>).

Let us consider the condition of Europe at the time of the voyages of the Northmen to America, and the great changes which were gradually preparing the way for the colonization of America.

For nearly one thousand years B. C. the ships of Tyre and Sidon, Alexandria and Greece, sailed through the Mediterranean into the Atlantic ocean as far as Britain. The early sailors were more adventurous and their ships more seaworthy than those of

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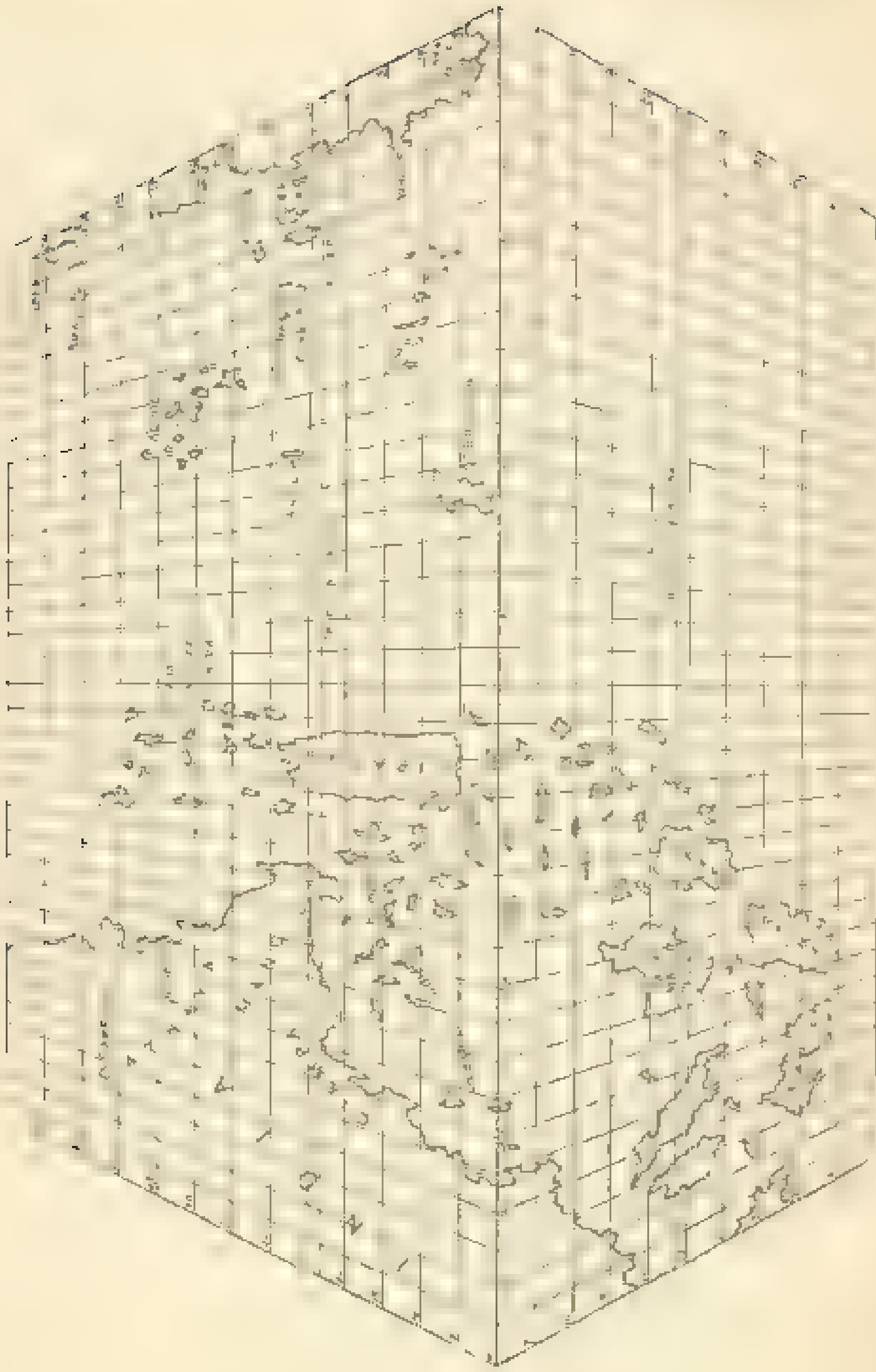
\* Reproduced from Fiske, *op. cit.*, p. 357.

Columbus, but as the mariners' compass was not known they early ventured out of sight of land.

When Rome became the imperial city commerce, as well as dominion and authority, centered in Rome, and with her decline and fall shipping and commerce disappeared from the Mediterranean.

Then, far away in the north on the Baltic sea, the Northmen began to sail the ocean, not for discovery or commerce but to plunder and ravage richer countries than their own. The vikings became noted as bold rovers of the sea, pillaging every country they could reach by water. Sailing southwestward, they landed on the coast of France and made a permanent settlement in Normandy. They coasted along the shores of France and Spain, plundering as they went; passing the Pillars of Hercules into the Mediterranean, they ravaged the coast of Italy and established colonies in southern Italy and Sicily. Sailing westward, they conquered and colonized the eastern coast of England and Scotland, the Shetland, Orkney and Faroe Islands, and from those islands, in A. D. 850, they sailed 300 or 400 miles northwestward to Iceland, where they made settlements which have continued until our day. One of the early settlers of Iceland was driven by adverse winds to Greenland, where he was compelled to winter, returning in the spring with an account of his discovery. About 980, Eric the Red, an outlaw, fled from Iceland with a few friends to Greenland. Prevented by the icebergs from landing on the eastern coast, they sailed around cape Farewell to the western coast where they founded two small colonies near Julianaburg, which existed for four hundred years until, forgotten and neglected by the mother country, overcome by want and hunger, they succumbed to the climate and the attacks of the Eskimo. Shortly after Eric had colonized Greenland, Bjarni, another Northman, sailing for Greenland, was driven by northeasterly winds continuing for many days far southwestward, to a land covered with dense woods. There is every reason to believe that this was America, and that Bjarni was its first discoverer. It was not the land of ice and glaciers he was seeking, so he sailed northeasterly again, and in ten days reached Greenland.

Leif Ericsson, one of the Norse vikings, hearing of this land of woods, about the year 1000 sailed from Greenland in search of it. Passing the barren coasts of Labrador and Newfoundland, which he called Helluland, his party reached Nova Scotia, or Markland, and sailed southward to a place where they found grapes, and hence called it Vineland. They were surprised at the



TOSCANELLI MAP 1874



for the last winter have, when a winter in Iceland has been unusually close. You must know our last was not but the beginning of winter but not so cold as the last winter. The weather in the month of January, it is to be expected that during November. There they have not the same of Norway, but after a few years, was also, but as the settlers were obliged to wintered in the middle of the last year. All or at least some of the discoveries of America have, perhaps, and as, respect to what depends on the fact, the course of the North American continent, but not at two generations after you should not be a distance from it. These legends have the appearance of truth, but as no reasonable man will that fact has been a real fact, let us say, and the discovery. The same were lost or laid away, and forgotten in the legends of Norway and Sweden. In our days, or if you have been a resident, and we know more of the work of the English and the North American was ever known before.

of a discovery was not known beyond the island and the only  
excursion of a few men on foot to the interior for about a year is the earliest sign  
of Europe.

[illegible]

we found that of the whole of the country, here, in the day and night  
 about the middle of the century, we are so completely surrounded by  
 an English land that we were studying. First and then, in a long  
 second, we were to express it, we have a new which the whole  
 the best book we ever read for the printing press—as far as  
 Europe was concerned the various references were just out of sight and also  
 in the top of our minds as though it had been the same, and after  
 the first of the Wars of the Roses were over Henry VI.



the 9th and 10th May, the weather is, on all days of the present week, and the temperature is only 50° and that the 1st of June and 1st of July will probably be very disagreeable and so. At 10° N. the sea is very calm for a long time, but on the 11th of June it is nearly two feet higher than on the 10th, and on the 12th it is nearly two thousand feet higher, but the temperature is only 50° and the wind is between two and three miles an hour.

The day is very warm, and the sun is very hot, and the wind is very strong. In the middle of the day the sun is very hot, and the wind is very strong. The third day of the present week the weather is very disagreeable and on the 11th of June it is very disagreeable. The wind is very strong and the sun is very hot. The temperature is very high, and the wind is very strong. The day is very warm, and the sun is very hot, and the wind is very strong. In the middle of the day the sun is very hot, and the wind is very strong. The third day of the present week the weather is very disagreeable and on the 11th of June it is very disagreeable. The wind is very strong and the sun is very hot. The temperature is very high, and the wind is very strong.

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[illegible][illegible][illegible]

On the road out from my home village, the queen, her attendants, and I arrived the last night of the festival at our own home, and were greeted by our children. I kissed them all and then looked at my husband, as he kissed me, and then I turned my eyes to the many women, who had come to see me, and I began to weep. I said to my husband:

[illegible]

• you go to take the pages out of the back of any history - you find a pocket with the new text

The highest node of the tree is a vertex of the graph  $G$  as  $\lambda$  is finite.  $\lambda$  is the max. length of the path and the lowest node is the root of the tree.

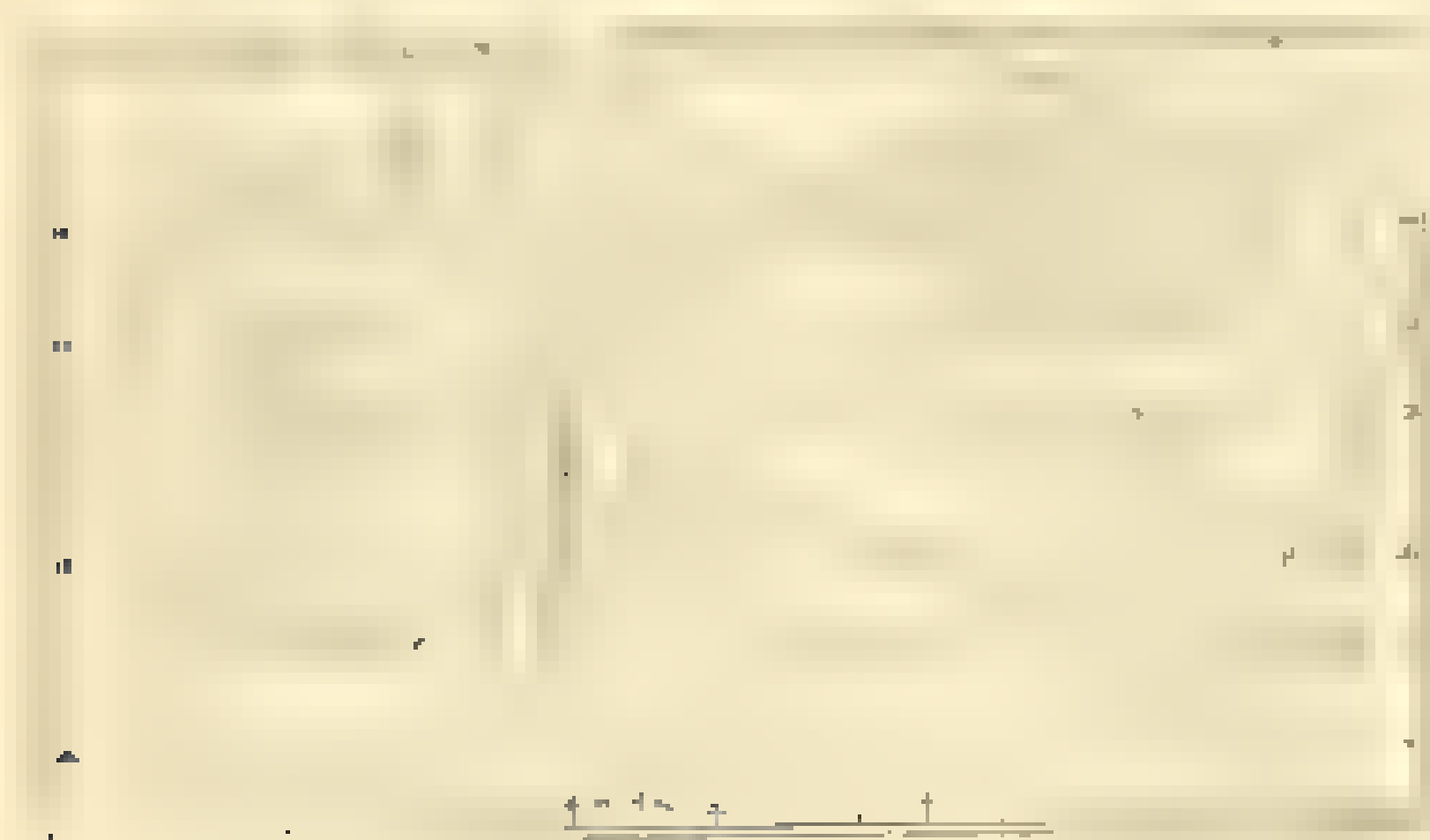
of great importance to our knowledge of the history of Portugal. In 1492 he sailed around the Gulf of Mexico, discovered Mexico and returned and sailed along the coast of North America nearly to the Pacific Ocean.

[illegible][illegible][illegible]

In half-space of time for him, he might even have been able to count the number of days when he spent in captivity. There are 1500 days in his life, as he said, and he had not returned yet. Magellan found it a great pity. He offered him to let him go, but he refused to do so. He offered him to go to the other side of the world, but he refused to do so. He offered him to go to the other side of the world, but he refused to do so. He offered him to go to the other side of the world, but he refused to do so.

having been so exhausted, he found a chance which proved to be the long sought passage to India. Three mounted warriors accompanied the straits of Magellan before they entered the straits and three of the vessels set to explore a channel to the south-westward, and returned to Spain.

The vessels, among the most of which was the *Victoria*, at the first anchorage, found land as the Cape islands. The weather was fair, the ocean was calm and smooth as any that could be expected in the Pacific ocean. There the three ships were washed by the food which they carried and the horses broke out.



\* Figure 1. Map of the Pacific Ocean.

Finally they reached the *Island of Mindanao* at 4 o'clock, and at last they reached the *Island of Luzon* at 10 o'clock. The *Victoria* was the only ship which was not damaged by the storm. The *Victoria* was the only ship which was not damaged by the storm. The *Victoria* was the only ship which was not damaged by the storm.

One of the three vessels was the *Victoria*, the *San Antonio*, and the *San Pedro*. The *Victoria* was the only ship which was not damaged by the storm. The *Victoria* was the only ship which was not damaged by the storm.

The *Victoria* was the only ship which was not damaged by the storm. The *Victoria* was the only ship which was not damaged by the storm.

\* Reproduced with minor modifications from the text from a drawing of a Chinese map showing the "Voyage of the Victoria" in "The Voyages of Ferdinand Magellan" by J. H. K. (London, 1891) pl. 1, p. 2.

at its apex, as it was a small  $\frac{1}{2}$  mile or less from the end of the narrow fjord between Westport and Alaska. There was a small, flat square and a large point (Charles) and the most distant was about 1000 yds. from the shore for the whole stretch. The king of salmon given to the house of Portland, May 1891, for the trout of salmon, consisted of 2000 lb. and we had a good supply of salmon and a small supply of fish and vegetables.

In 1893, when the ship was again in the water, I discovered a small, flat square and a large point (Charles) and the most distant was about 1000 yds. from the shore for the whole stretch. The king of salmon given to the house of Portland, May 1891, for the trout of salmon, consisted of 2000 lb. and we had a good supply of salmon and a small supply of fish and vegetables.

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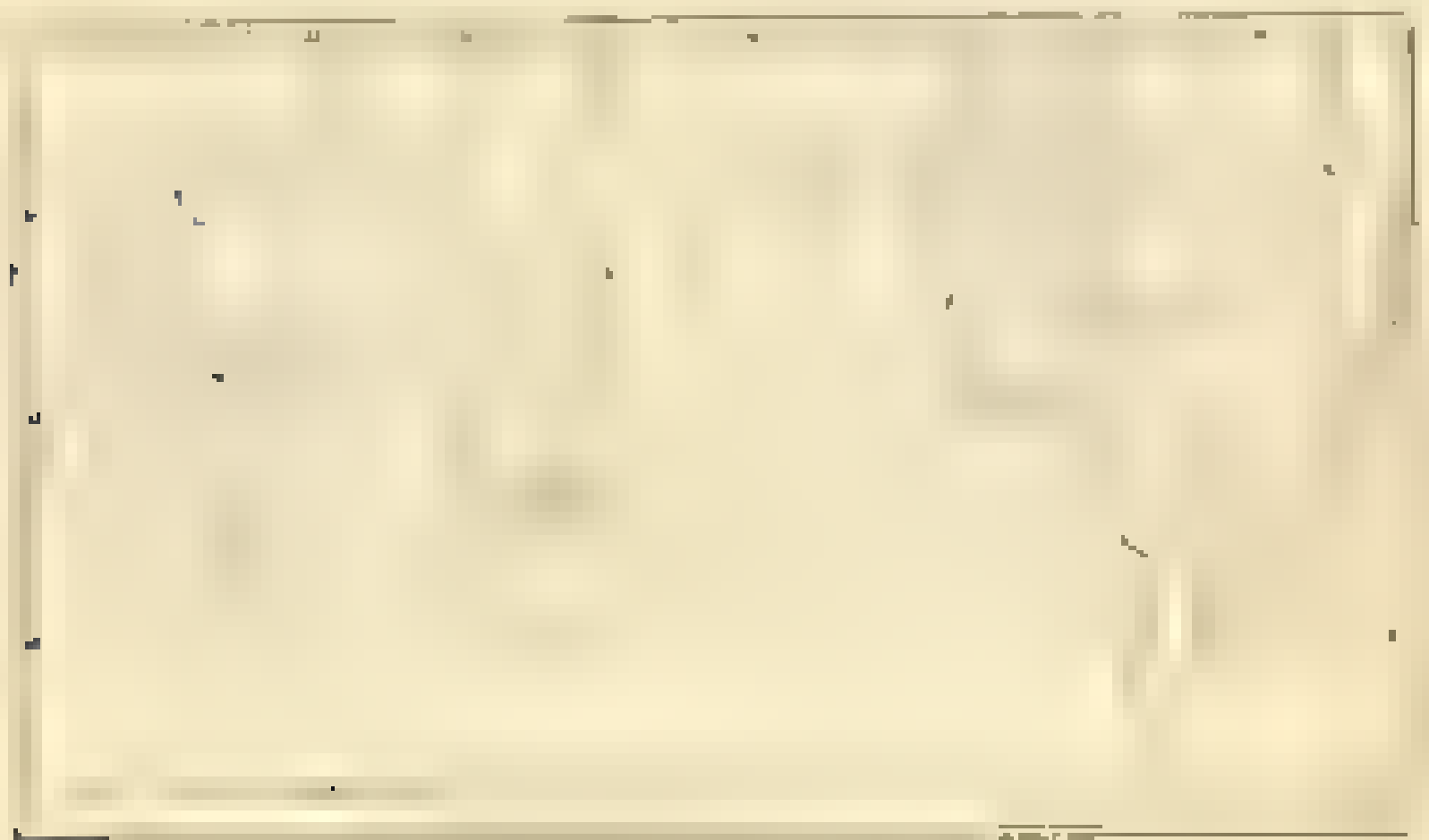
In the summer of 1893, when the ship was again in the water, I discovered a small, flat square and a large point (Charles) and the most distant was about 1000 yds. from the shore for the whole stretch.









[illegible]

1949年11月1日，中国科学院成立，这是新中国第一个科学研究机构。

[illegible]

Nearest and kindest wishes and love from the first voyage of Columbus to the voyage of Drake, and of all the intervening centuries, are united in sympathy and affection with the children of the brave and noble Columbus.

Thus, he is not called to his native country, he is not called to his native land, he is not called to his native home.

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JUAN DE LA COSA MAP, 1500







west. North America and South America are connected, and the Austral continent is shown south of the straits of Magellan.

There was no map published until after the sixteenth century that gave a correct delineation of the southeast of America. It is no wonder that Columbus never comprehended the nature or extent of his discoveries. The more we study the history and geography of the times, the influence of the church, the difficulty of determining longitude, the ignorance of the movements of the mariners' compass and of the distance to Cipango, the greater will be our admiration for Columbus. Yet a recent writer speaks of the discovery of Columbus as a blunder, and others say, as if in disparagement of his work, that he knew of the discoveries of the Northmen and was only following their track; that the chart of Toscanelli which Columbus took on his first voyage indicated clearly his route; that Columbus died in the belief that he had discovered Cipango and Cathay, never realizing that it was the new world, and that Americus Vesputius is entitled to the greatest credit.

Let us hear the opinion of a contemporary of Columbus, Sebastian Cabot: "When news was brought that Don Christopher Colon, the Genoese, had discovered the coasts of India, whereof was great talk in all the court of King Henry the VII, who then reigned, all men with great admiration affirmed it to be a thing more divine than humane to sail by the west into the east, where the spices growe, by a chart that was never before known."

It is very doubtful if Columbus knew anything of the voyages of the Northmen, nor would such knowledge have been of much value, for Greenland was then believed to be a part of Europe and joined to Norway. If Columbus had known of the discoveries and sought the countries they had found, he would have sailed northward instead of westward.

Many before Toscanelli and Columbus believed the world to be round, and that by sailing westward Asia might be reached. Columbus not only believed but proved it. He made no blunder, for he sought land the other side of the Atlantic, and he found it. Vesputius knew little more than Columbus of the new world, and never realized that North America and South America were one continent. The maps show that learned geographers long after the discoveries of Columbus, Vesputius, Cabot and Magellan did not understand the geography of the new world.



All voyages before that of Columbus had been coasting voyages, the sailors keeping in sight of land. Columbus pushed out into the unknown and trackless ocean, leaving the land far behind. Good seamen were unwilling to undertake so terrible a voyage, so convicts were obtained, liberated from prison on condition of sailing with Columbus. A brave, resolute and self-contained spirit was necessary to command such a crew on such an expedition. New wonders startled him each day. The magnetic needle, instead of pointing steadily northward, swerved toward the west. The wind for many days blew unvaryingly from the east, and the sailors thought it would prevent them from returning. The *Satagoosa* sea puzzled them. They daily grew more timid as they sailed further and further into the ocean, though they had sailed much further than they supposed. No voyage like that was ever made before and none like it can ever be made again, for the great discoverer solved the problem and reached the east by sailing west.

How like a tragedy the life of Columbus! Twelve years of preparation and waiting, five in Portugal and seven at the court of Isabella; his demand; its rejection; his recall; his departure from Palos with three small vessels; his triumphant return after the discovery of America, admiral and governor; sent home in chains; his death, poor, unknown and forgotten. Contrast this with what has recently taken place at Palos. Last September (1892) the greatest war ships of the world from Spain, Italy, Germany, Great Britain and the United States, propelled by a power unknown to Columbus, escorted from the harbor of Palos three little ships, two without decks, fashioned after the ships of Columbus.

At the time of Columbus' death none to honor him; now all Europe and the new world unite in rendering him the greatest homage ever paid to man!



